CLAIMS

1. An optical wavelength control system for an optical source (LD), the system including:

- a beamsplitter arrangement (9, 10; 12) for propagating radiation from said source (LD) over two paths,

- first (1) and second (2) photodetectors each arranged in a respective one of said two propagation paths,

- a wavelength selective optical filter (3) interposed in the propagation path from said source (LD) to said first photodetector (1), whereby said first (1) and second photodetector (2) are adapted to generate photocurrents indicative of the possible displacement of the actual wavelength of the radiation from said source (LD) with respect to a reference wavelength and the power emitted by the optical source, respectively,

characterized in that the system includes a support bench (7) extending in a given plane and said beamsplitter arrangement (9, 10; 12) is arranged to split said radiation from said source (LD) towards said first (1) and second (2) photodetectors in a direction substantially perpendicular said given plane of said bench (7).

2. The system of claim 1, characterized in that said wavelength selective optical filter (3) is mounted over said beamsplitter arrangement (9, 10; 12) whereby said beamsplitter arrangement, said optical filter (3) and said photodiodes (1, 2) comprise an assembly extending in a direction substantially perpendicular said given plane of said bench (7).

3. The system of either of claims 1 or 2, characterized in that said beamsplitter arrangement (9, 10; 12), said optical filter (3) and said photodiodes (1, 2) comprise an assembly having an associated a frame (100) carrying said beamsplitter arrangement (9, 10; 12), said optical filter (3) and at least one of said photodiodes (1, 2) oriented at pre-set angles.

4. The system of claim 3, characterized in that said filter (3) is adapted to be mounted on said frame (100) with a selectively determined tilt.

5. The system of either of claims 3 or 4, characterized in that said frame (100) is adapted to be mounted on said bench (7) with a selectively determined tilt.

6. The system of claim 1, characterized in that said beamsplitter arrangement (9, 10; 12) has an associated substrate (11) for mounting said optical filter (3).

7. The system of claim 6, characterized in that said associated substrate (11) includes a recessed portion adapted to receive said optical filter (3).

8. The system of either of claims 6 or 7, characterized in that said associated substrate (11) is L-shaped.

9. The system of any of claims 6 to 8, characterized in that said associated substrate (11) carries a metal pattern for mounting at least one of said first (1) and second (2) photodetectors.

10. The system of any of the previous claims, characterized in that said beamsplitter arrangement includes two partial beamsplitters (9, 10) arranged in a cascaded fashion to be traversed by the radiation from said source (LD).

11. The system of claim 6 and claim 10, characterized in that said associated substrate (11) is arranged straddling said two beamsplitters (9, 10).

12. The system of any of the previous claims 1 to 9, characterized in that said beamsplitter arrangement includes a double splitter (12).

13. The system of claim 12, characterized in that said double splitter includes a single plate polished as a 45° rhombic-prism.

14. The system of claim 6 and any of claims 12 or 13, characterized in that said associated substrate (11) consists of a flat plate carrying said filter (3) in a position facing said splitter (12)

15. The system of any of the previous claims, characterized in that it includes a laser source (LD) as said optical source.

16. The system of any of the previous claims, characterized in that it includes a lens (8) for collimating the radiation from said optical source (LD).

17. The system of any of the previous claims, characterized in that it includes a silicon optical bench (7) as said bench.

18. The system of any of the previous claims, characterized in that said filter (3) is a periodic filter such as an etalon filter.